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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/500,860 | 07/19/2004 | Kazuomi Shimizu | 255429US3PCT | 2925 |
| 22850 | 7590 | 07/22/2005 | EXAMINER | |
| OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | HYEON, HAE M | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2839 | |

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SM

Office Action Summary

Application No.

10/500,860

Applicant(s)

SHIMIZU ET AL.

Examiner

Hae M. Hyeon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 July 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/19/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to because the cross hatching line used for the housing is from a metal and not for a resin. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The abstract of the disclosure is objected to because the reference number in the abstract should be enclosed in the parenthesis. Correction is required. See MPEP § 608.01(b).
3. The disclosure is objected to because of the following informalities:
- On page 7, line 12, it seems that "Fig. B" should be -- Fig. 1B --.

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- On page 8, line 19, “the connecting recess 12” should be -- the connecting recess 13 --.

Appropriate correction is required.

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Present title has too many repetitions. The examiner suggests the applicant to change the title to simply -- Electrical Connector for boards and method of making --.

Claim Objections

5. Claim 1 is objected to because of the following informalities:

- Claim 1, line 18, the examiner suggests the applicant to change “each the opening” to -- the each opening --.
- Claim 1, line 19, the examiner suggests the applicant to change “adjacent each” to -- adjacent to each --.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Black et al (US 3,697,933).

Black discloses an electrical connector 10 for boards 66, comprising an insulating housing 12 including a connecting recess (front opening of the connector 10) opened in a connecting direction and a plurality of terminals 44 retained laterally arranged in the housing 12. The housing also includes a pair of opposed side walls 14 and a plurality of partition walls (see Fig. 1) for separating the adjacent terminal retainer recesses 38 and a plurality of openings 56 formed in outer side surface of the side wall 14 corresponding to respective partition walls (see Fig. 5), wherein through the each opening, a pair of the terminal retainer recesses 38 adjacent to each other via one of the partition walls corresponding to the opening 56 are opened to the exterior of the housing 12 (see column 2, lines 42-52).

8. Claims 3-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Koseki et al (US 6,155,886.)

Koseki discloses a metal mold for forming a housing 30 of an electrical connector 3 comprising a plurality of terminal retainer recess-forming ribs 10 (Koseki uses the terminal 10 itself for forming the terminal retainer recess, see column 3, lines 26-28) and a plurality of opening-forming pins 291 and 241, each interposing between a pair of adjacent terminal retainer recess-forming ribs 10 (see Fig. 7), for forming openings in a side wall 31 of the housing 30 at the vertically intermediate portion of the side walls 31 of the housing 30.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koseki et al in view of Black et al.

Koseki discloses an electrical connector 3 comprising an insulative housing 30 having a connecting recess 32 opened in a connecting direction, a pair of opposed side walls 31, a plurality of terminal retainer recesses 310 penetrating through respective side walls 31, a plurality of partition walls (wall between the terminal retainer recesses 310), and a plurality of openings 345 formed in outer side surfaces of respective side walls 31, corresponding to respective partition walls, at the vertically intermediate portions of the side walls 31 of the housing 30. However, in view of Figure 4, it seems that a pair of the terminal retainer recesses adjacent to each other is not opened to the exterior of the housing 30 through the opening 345.

Black discloses an insulative housing 12 of an electrical connector 10 comprising a plurality of terminal retainer recesses 38, wherein a pair of terminal retainer recesses 38 adjacent to each other is opened to the exterior of the housing 12 through a plurality of openings 56 formed on an outer surface of a side wall 14 of the housing 12.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the housing of the electrical connector taught by Koseki such that it would have a pair of the terminal retainer recesses adjacent to each other being opened to the exterior of the housing through the openings formed on an outer surface of the housing as taught by Black because it only deals with changing the size of the opening formed on the side wall and the partition wall in order to connect the terminal retainer recesses with the openings, which does not affect or change the function of the electrical connector. A change in size is

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generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent No. 3,966,290 by Little et al., US Patent No. 5,779,505 and 5,842,874 by Yagi et al., US Patent No. 6,010,370 by Aihara et al., and US Patent No. 6,159,021 by Kusuvara.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hae M. Hyeon whose telephone number is 571-272-2093. The examiner can normally be reached on Mon.-Fri. (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tulsidas C. Patel can be reached on (571) 272-2098. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hae M Hyeon
Primary Examiner
Art Unit 2839

hnh hnh

Hae Moon Hyeon